Stipa comata - Bouteloua gracilis - Carex filifolia Herbaceous Vegetation

COMMON NAME	Needle-and-thread grass-Blue grama-Threadleaf sedge Herbaceous Vegetation
SYNONYM	Mixed prairie
TNC SYSTEM	Terrestrial
PHYSIOGNOMIC CLASS	Herbaceous
PHYSIOGNOMIC SUBCLASS	Perennial graminoid vegetation
PHYSIOGNOMIC GROUP	Temperate or subpolar grassland
FORMATION	Medium-tall sod temperate or subpolar grassland
ALLIANCE	*Stipa comata-Bouteloua gracilis* Herbaceous Alliance

CLASSIFICATION CONFIDENCE LEVEL 2

RANGE
This community is common in Nebraska, North Dakota, South Dakota, southern Saskatchewan, and southern Manitoba.

Scotts Bluff National Monument
This community is found throughout the Monument.

ENVIRONMENTAL DESCRIPTION
Globally
This community is found on flat to gently sloping sites, predominantly with sandy loam or loam soil. The soil is typically 40-100 cm deep.

Scotts Bluff National Monument
This community occupies moderately steep (35%) to level slopes on well-drained sandy loams and silt loams. It is found on top of escarpments in a few places but is mostly on slopes and surrounding plains.

USFWS WETLAND SYSTEM Not applicable

MOST ABUNDANT SPECIES
Globally

Strata	Species
Herbaceous	*Bouteloua gracilis*, *Carex duriuscula*, *C. filifolia*, *Pascopyrum smithii*, *Stipa comata*

Scotts Bluff National Monument

Strata	Species
Herbaceous	*Bouteloua gracilis*, *Carex duriuscula*, *C. filifolia*, *Pascopyrum smithii*, *Stipa comata*

DIAGNOSTIC SPECIES
Globally
Aristida purpurea var. *longiseta*, *Bouteloua gracilis*, *Carex duriuscula*, *C. filifolia*, *Heterotheca villosa var. villosa*, *Gaura coccinea*, *Pascopyrum smithii*, *Phlox hoodii*, *Stipa comata*, *Sporobolus cryptandrus*

Scotts Bluff National Monument
Artemisia frigida, *Carex filifolia*, *Krascheninnikovia lanata*, *Stipa comata*

VEGETATION DESCRIPTION
This midgrass prairie community is dominated by graminoids that are usually between 0.5 and 1 m tall. The vegetation cover is moderate. The dominant species are *Bouteloua gracilis*, *Carex filifolia*, and *Stipa comata*. *S. comata* usually has the most coverage of any single species. *Pascopyrum smithii* is constant in this community and can be locally abundant. *Carex duriuscula* is not always present but is also be abundant at some sites. Forbs that are typical of this community are *Heterotheca villosa var. villosa*, *Gaura coccinea*, *Liatris punctata*, and *Phlox hoodii*. Shrubs rarely grow taller than the grasses, but *Artemisia frigida* is very common in this community. Other grasses that are likely to be present are *Aristida purpurea* var. *longiseta*, *Koeleria macrantha*, and *Sporobolus cryptandrus*. On 19 stands in west-central Montana the cover by the different strata was as follow shrubs - 6%, graminoids - 67%, forbs - 11, bryophytes - 14%, litter - 55%, rock 4%, bare soil - 9% (Mueggler and Stewart 1978).

Scotts Bluff National Monument
Carex filifolia is particularly abundant, especially on undisturbed sites. On these sites it can form fairly dense turf. *Stipa comata* occupies the spaces between the sedge clumps. *Carex filifolia* becomes more sparse on disturbed sites. These sites frequently have greater coverage by *Pascopyrum smithii*. Where this community occurs on steep slopes of the escarpments *C. filifolia* may be almost absent. *Calamovilfa longifolia* and *Andropogon hallii* are locally common in loose sand on these slopes and near the edges of steep draws. *Bouteloua gracilis* also becomes more prominent upslope on the escarpments. *Krascheninnikovia lanata* is the most frequent shrub. It may be scattered to locally abundant in disturbed, sandy soil, often with *Artemisia frigida*. Forb species are quite variable and none seems to be restricted to this community. *Sphaeralcea coccinea* and *Gaura coccinea* are among the more common constituents. On nearly level areas at the base of slopes on which this community occurs *Pascopyrum smithii*, *Kraschenninikovia lanta*, and annual *Bromus* spp. become more common and in places may predominate to the exclusion of *Carex filifolia* and *Stipa comata*. These areas seem to develop only where grazing has been eliminated for long periods of time.

OTHER NOTEWORTHY SPECIES Information not available.

CONSERVATION RANK G5

RANK JUSTIFICATION Information not available.

COMMENTS
Scotts Bluff National Monument
This community grades into Siltstone - Clay Butte Sparse Vegetation at higher elevations on the bluffs. It also intergrades with *Pascopyrum smithii* Herbaceous Vegetation on level slopes below the escarpments. Near the edges of steep draws, this community often contains more *Calamovilfa longifolia* and can appear similar to *Andropogon hallii-Calamovilfa longifolia* Herbaceous Vegetation. *Stipa comata-Bouteloua gracilis-Carex filifolia* Herbaceous Vegetation is the most common and widespread community at Scotts Bluff NM.

REFERENCES

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